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Biography:

Axel Hoffmann is a staff scientist at the Materials Science Division and the Center for Nanoscale Materials at the Argonne National Laboratory. Before joining Argonne in 2001 he was a postdoctoral fellow at the Los Alamos National Laboratory and in 1999 he received his Ph.D. in physics at the University of California – San Diego under the supervision of Prof. Ivan K. Schuller. His research interests encompass a wide variety of magnetism related subjects, including basic properties of magnetic heterostructures, spin-transport in novel geometries, and biomedical applications of magnetism. He currently serves as the chair of the Technical Advisory Committee of the IEEE Magnetics Society and as a vice-chair for the Topical Group on Magnetism and its Applications of the American Physical Society. During his research he published more than 70 articles with over 700 combined citations.

Selected recent publications:

“Magnetic Instability Regions in Patterned Magnetic Structures: Influence of Element Shape on Magnetization Reversal Dynamics,” X.F. Han, M. Grimsditch, J. Meersschaut, A. Hoffmann, Y. Ji, J. Sort, J. Nogués, R. Divan, J.E. Pearson, and D.J. Keavney, *Phys. Rev. Lett.* In Press.

“Imprinting Vortices into Antiferromagnets,” J. Sort, K.S. Buchanan, V. Novosad, A. Hoffmann, G. Salazar-Alvarez, A. Bollero, M.D. Baró, B. Dieny, and J. Nogués, *Phys. Rev. Lett.* **97**, 107203 (2006).

“Giant Magnetoresistance in Ferromagnet / Superconductor Superlattices,” V. Peña, Z. Sefrioui, D. Arias, C. Leon, J. Santamaria, J.L. Martinez, S.G.E. te Velthuis, and A. Hoffmann, *Phys. Rev. Lett.* **94**, 057002 (2005).

“Spin Injection, Diffusion, and Detection in Lateral Spin-Valves,” Y. Ji, A. Hoffmann, J.S. Jiang, and S.D. Bader, *Appl. Phys. Lett.* **85**, 6218 (2004)

“Symmetry driven irreversibilities at ferromagnet-antiferromagnetic interfaces,” A. Hoffmann, *Phys. Rev. Lett.* **93**, 097203 (2004).